



IMPACTS OF THREE INTERVAL TARIFF ON INDUSTRIES

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by
K.M. SUSIL CHANDANA SOMARATHNA

Supervised by: Prof. H.Y. Ranjit Perera
Dr. Tilak Siyambalapitiya

Department of Electrical Engineering
University of Moratuwa, Sri Lanka

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94851



Abstract

Ceylon Electricity Board (CEB) has introduced a new tariff structure with effect from 15th March 2008 and it includes flat rate tariff, two part time of day tariff and newly introduced three part time of day tariff for the industrial consumers. Aim of the CEB by introducing optional three part time of day tariff was the reduction of peak demand and the well distributed base load throughout a day when their newly installed coal power plants are connected to the system.

This is the one of outcome of the researches were done by CEB in past few years and the successfulness of this implementation is depend upon the awareness of the consumers. Due to the lack of past investigations to prove the benefits or losses to the consumers as well as to the CEB by introducing this new tariff structure, the results of this project will be more important to the both parties.

This investigation initiated by the selection of sample of industries and the selected sample covers major categories of industries as ceramic, rubber, food processing, hotel, and apparel. When the selection it was also considered the operational pattern of these industries as one shift, two shifts, and three shifts per day. The priority was given to their personal interests as well to carry out these investigations in their factories.

As a first step the data were collected using data loggers to identify the loading patterns and major electricity consumed sections of these industries. Then the well suit options for the change of loading-patterns were identified with the involvement of responsible officers of same industries and then evaluated the expected benefits which could be obtained by tariff part time of day tariff with the proposed changes.

At the end the reduction of peak electricity demand of Sri Lanka was calculated to generalise the results obtained in this investigation and identified some drawbacks of newly introduced three part time of day tariff.



The final results of this research show the average minimum benefit to the industrial consumer is about 10% of their current electricity cost and it can be maximised by further investigations. If 75% of total industries shift their 10% of load out of peak hours, Ceylon Electricity Board will entertain 130 MW reduction of its peak demand.